

**PAT-NO:** JP358185927A  
**DOCUMENT-IDENTIFIER:** JP 58185927 A  
**TITLE:** FOUR-CYCLE ENGINE WITH TURBO SUPERCHARGER  
**PUBN-DATE:** October 29, 1983

**INVENTOR-INFORMATION:**

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**ASSIGNEE-INFORMATION:**

NAME	COUNTRY
YAMAHA MOTOR CO LTD	N/A

**APPL-NO:** JP57067071  
**APPL-DATE:** April 23, 1982

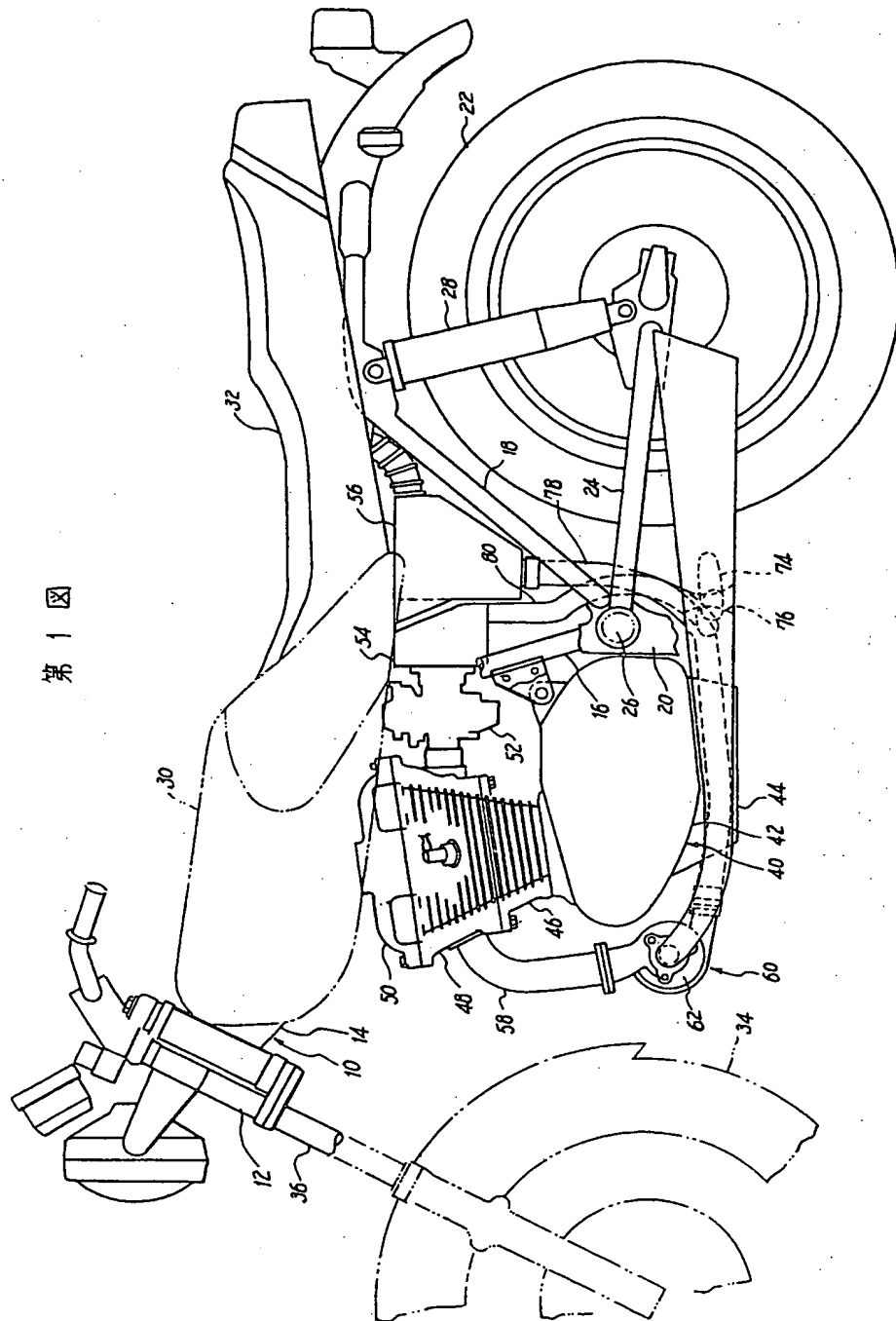
**INT-CL (IPC):** F02B027/04 , F01N007/10 , F02B037/00  
**US-CL-CURRENT:** 60/605.1

**ABSTRACT:**

**PURPOSE:** To promote the supercharging efficiency in a captioned engine with two cylinders of lead side and delay side to be operated at phase difference of 180° by differentiating the length of branch pipe parts connected to each cylinder of an exhaust manifold for uniforming exhaust pulsations.

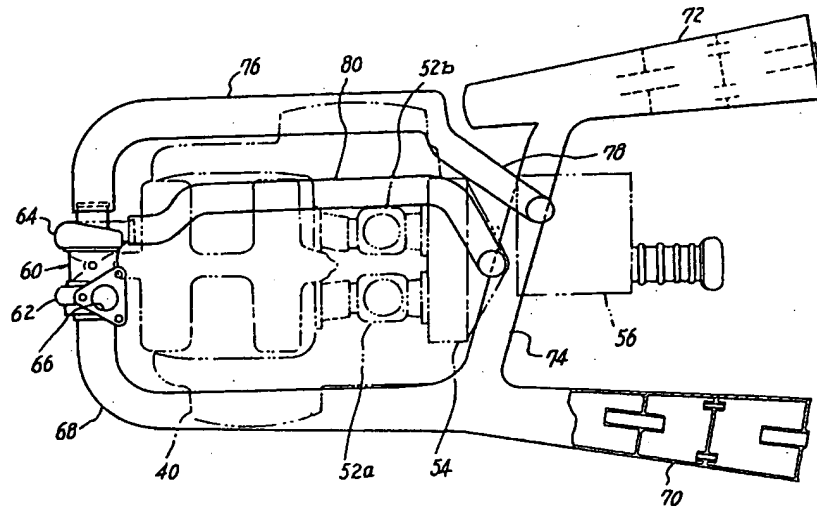
**CONSTITUTION:** In an motorcycle, a parallel two-cylinder engine 40 is equipped under a fuel tank 30 on a main frame 10, and a turbo supercharger 60 is provided sideways in front of this engine 40. Cylinders 40A and 40B on both sides of the engine 40 are differentiated as a lead side cylinder and a delay side cylinder to be opened and closed with the phase difference of their suction and exhaust valves of 180°. In the supercharger 60, the collected end of an exhaust manifold 58 is connected to an exhaust inlet 66 of a turbine 62, and the front end of an exhaust pipe 68 is connected to an exhaust outlet. At this stage, as for branch pipe parts 58a and 58b to be connected to exhaust ports of cylinders 40A and 40B of the exhaust manifold 58, the branch pipe 58a to the lead side cylinder 40A is constructed to be shorter than the other branch pipe part 58b.

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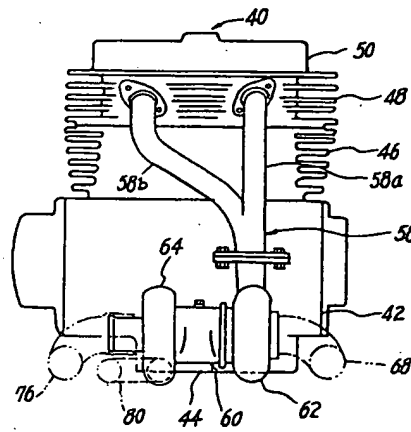


第 1 図

第 2 図



第 3 図



第 4 図

